

M. Sc. (Biotechnology) Sem-II (CBCS 2018 Course) : SUMMER - 2019

SUBJECT: - ANIMAL TISSUE CULTURE

Day : **Saturday**
Date : **20/04/2019**

S-2019-1432

Time : **02.00 PM TO 05.00 PM**
Max. Marks. : **30**

N.B.

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Attempt Section I and Section II in same Answer Book
-

SECTION-I

- Q.1** Attempt **ANY SEVEN** of the following: **(07)**
- a) State the working of horizontal laminar flow hood.
 - b) Define 'cell strain'.
 - c) Write the principle of sterilization using autoclave.
 - d) How pH of culture medium is identified?
 - e) What is an open culture system?
 - f) What is cross contamination?
 - g) State the formula for enumeration of cells.
 - h) Define 'density dependent inhibition of mitosis'.
- Q.2** Attempt **ANY TWO** of the following: **(08)**
- a) What is balanced salt solution? Explain its role in tissue culture.
 - b) Define animal cell culture. Explain its advantages and limitations.
 - c) What is primary culture? Explain explant culture method for its preparation.

SECTION-II

- Q.3** State the role of following in ATC. (Attempt **ANY SEVEN**) **(07)**
- a) Stirrer flask
 - b) Peniciline and Streptomycin.
 - c) EDTA
 - d) Dimethyl sulfoxide
 - e) Serum free medium
 - f) Roller bottles
 - g) Propidium iodide
 - h) MTT dye
- Q.4** Attempt **ANY TWO** of the following: **(08)**
- a) How anchorage dependent cell lines are subcultured?
 - b) What are microcarriers? Explain their use in tissue culture.
 - c) Compare the growth characteristics of normal and continuous cell line.

* * * *